

Abstract

**ABSTRACT**

The ~~present invention relates to a~~ **A** solder alloy and a multi-component soldering system, to the use of the same, and to a  
5 method for repairing gas turbine components **are described herein.**

The solder alloy based on nickel ~~contains~~ **includes** the following elements: nickel (Ni), chromium (Cr), cobalt (Co),  
10 molybdenum (Mo), aluminum (Al), tantalum (Ta), niobium (Nb), yttrium (Y), hafnium (Hf), palladium (Pd), boron (B) and silicon (Si).

The multi-component soldering system ~~is made up of~~ **includes**  
15 the solder alloy ~~according to the present invention~~ and additionally of at least one additive material. The additive materials ~~are made up of~~ **include** the following elements: nickel (Ni), chromium (Cr), cobalt (Co), molybdenum (Mo), aluminum (Al), tantalum (Ta), titanium (Ti), rhenium (Re),  
20 iron (Fe), niobium (Nb), yttrium (Y), hafnium (Hf), palladium (Pd), carbon (C), zirconium (Zr), boron (B) and silicon (Si).

A specific mixing of solder alloy and additive materials produces a multi-component soldering system that ~~is~~ **may be**  
25 specifically adapted to the material of the component to be repaired, the mixture ratio of solder alloy and additive materials being freely selectable.

The repair method ~~according to the present invention~~ is based  
30 on high-temperature diffusion soldering using the solder alloy ~~according to the present invention~~ **hereof** or the multi-component soldering system ~~according to the present invention~~ **hereof.**